What is claimed is:

1. A method for forming a Josephson junction, the method comprising the following steps of:

forming a two-layer film having an amorphous MgO layer and a high orientation MgO layer on a Si substrate; and

laminating a NbN film or an NbCN film on the two-layer.

2. The method according to claim 1, wherein the NbN film or the NbCN film is used as an electrode.

3. A Josephson junction formed by the method according to claim 1.

4. A Josephson junction comprising:

a Si substrate;

a two layer film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate; and

a NbN film or a NbCN film laminated on the two layer film.

5. The Josephson junction according to claim 4, wherein the NbN film or the NbCN film is used as an electrode.

6. A Josephson junction array comprising: at least one Josephson junction comprising a Si substrate, a two layer

film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

7. The Josephson junction array according to claim 6, wherein the NbN film or the NbCN film is used as an electrode.

8. A digital to analog converter comprising: Josephson junction arrays comprising Josephson junctions, wherein at least one of the Josephson junctions comprises a Si substrate, a two layer film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

9. The Josephson junction array according to claim 8, wherein the NbN film or the NbCN film is used as an electrode.

10. A Josephson voltage generating apparatus comprising: a digital to analog converter comprising junction arrays for programmable converter using Josephson junctions, wherein at least one of the Josephson junctions comprises a Si substrate, a two layer film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

11. The Josephson junction array according to claim 10,

wherein the NbN film or the NbCN film is used as an electrode.

12. A Josephson voltage standard apparatus comprising: a digital to analog converter comprising junction arrays for programmable converter using at least one Josephson junction, wherein at least one of the Josephson junctions comprises a Si substrate, a two layer film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

13. The Josephson junction array according to claim 12, wherein the NbN film or the NbCN film is used as an electrode.

14. A superconducting sub-millimeter wave oscillator, comprising: at least one Josephson junction comprising a Si substrate, a two layer film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

15. The superconducting sub-millimeter wave oscillator, according to claim 14, wherein the NbN film or the NbCN film is used as an electrode.

16. A superconducting quantum interference device, comprising: at least one Josephson junction comprising a Si substrate, a two layer film comprising an amorphous MgO layer

and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

17. The superconducting quantum interference device according to claim 16, wherein the NbN film or the NbCN film is used as an electrode.

18. A superconductivity digital integrated circuit comprising: at least one Josephson junction comprising a Si substrate, a two layer film comprising an amorphous MgO layer and a high orientation MgO layer on the Si substrate, and a NbN film or a NbCN film laminated on the two layer film.

19. The superconductive digital integrated circuit according to clam 18, wherein the NbN film or the NbCN film is used as an electrode.